

Abstract of the Disclosure

A needle assembly 10 comprising an infusion needle 11 that includes a needle cannula 13 made of a superelastic material such as Nitinol. The needle cannula is cold-worked or heat annealed to produce a preformed bend 16 that can be straightened within passageway 21 of a coaxial outer cannula 12 for introduction into the body of a patient. Upon deployment from the outer cannula, the needle cannula substantially returns to the preformed configuration for the introduction or extraction of materials at areas lateral to the entry path of the needle assembly. The needle assembly can comprise a plurality of needle cannulae than can be variably arranged or configured for attaining a desired infusion pattern.